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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,014	08/18/2003	Ralph Anderson	KCX-723 (19746)	2961
22827	7590	12/13/2006	EXAMINER	
DORITY & MANNING, P.A. POST OFFICE BOX 1449 GREENVILLE, SC 29602-1449			CORDRAY, DENNIS R	
			ART UNIT	PAPER NUMBER
			1731	

DATE MAILED: 12/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/643,014		ANDERSON ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Dennis Cordray		1731	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-8,10-18,20-35 and 47-64 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27-32,34 and 35 is/are allowed.
- 6) ☒ Claim(s) 1,3,6-8,10-12,14-18,20-26,33 and 47-64 is/are rejected.
- 7) ☒ Claim(s) 4,5,13,21-25,50,56 and 62-64 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f):
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application  |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                           |

## **DETAILED ACTION**

### ***Examiner's Note***

The indication of potentially allowable subject matter discussed during a telephone interview with Alan R. Marshall on 7 December, 2006 is hereby withdrawn in view of newly found prior art, as discussed below. The Amendment from the Applicant dated 7 December, 2006 and filed by Facsimile pursuant to the discussion of allowable subject matter has not been entered. The objections and rejections below are thus based on the communication filed on 10/12/2006.

### ***Response to Arguments***

Applicant's arguments filed 10/12/2006 with respect to the rejections of claims 1, 3-35 and 47-64 under 35 U.S.C. 103(a) have been fully considered and are persuasive. The prior art of Brooks et al, upon which the rejections are based, does not recite a broke comprising an adhesive latex, and would not be obvious to apply the method of Brooks et al to a broke comprising an adhesive latex because of the chemical and physical differences between the polyethylene recited in Brooks et al and the adhesive latex recited in the amended claims. Since all of the rejections under 35 U.S.C. 103(a) are based on Brooks et al as the primary reference, all rejections have been withdrawn.

However, upon further consideration, new grounds of rejection are made as detailed below.

### ***Specification***

The abstract of the disclosure is objected to because it contains more than 150 words. Correction is required. See MPEP § 608.01(b).

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### ***Claim Objections***

Claims 33 and 60 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The claims depend from Claims 27 and 47 respectively and recite the limitation that "said latex polymer comprises from about 1% to about 60% by weight of said broke," that is also contained in the parent claims.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 47 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 47-64 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 47 provides for a method of mechanically treating broke but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 48-64 depend from and thus inherit the indefiniteness of Claim 47.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 6-8, 10-11, 14-18, 20, 26, 47-49, 51-54 and 57-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Espenmiller et al (3245868) in view of Merker et al (6541099).

Espenmiller et al discloses a process of continuously treating paper broke comprising a thermosetting wet strength resin for recycle into the papermaking furnish (col 1, lines 10-23 and 48-68). The broke is generated from trim and slabs from finished reels, off-quality rolls, bale trimmings that accumulate during the normal operation and

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broke that accumulates during abnormal operation in the production of paper products (col 1, lines 38-47). Espenmiller et al teaches that typically considerable handling and considerable storage area are typically needed for broke that is either sold to a broker or treated in batch processes at the plant (col 1, lines 24-34).

The continuous treatment disclosed by Espenmiller et al comprises pulping the broke in a pulper at 1% to 10% consistency to shred it to a chip (fibrous aggregate) size of about ¼ inch square (approximately 6 mm) (col 2, lines 57-58; col 4, lines 30-33). The chips are further treated in an inclined screw dewatering tube and a screw feeder that reduces the chip size to about 1/3 of its original size (approx 2 mm) (col 2, lines 62-68). Espenmiller et al discloses additional chemical treatment and defibering of the chips (col 1, lines 55-69). The use of the language "comprising" and "comprises" in the instant claims does not exclude other treatment steps, thus the pulping step of Espenmiller et al meets the limitations of the claims. The pulping, screw dewatering and screw feeding steps of Espenmiller et al are mechanical treatments and result in chip sizes within the claimed ranges.

Espenmiller et al does not disclose that the adhesive latex is present in an amount from 1 to 60% of the broke, or that a portion of the fiber aggregates are coated with the latex and a portion are relatively free of the latex.

Merker et al discloses a single or multi-layer paper product that has been creped (Abs; col 4, line 61 to col 5, line 5). The paper comprises a creping adhesive applied in a pattern covering from 10-60% of the web and applied in a total amount of from 2-10% by weight of the web on each side (col 2, lines 58-64). The creping adhesive can be an

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acrylate, a vinyl acetate, a vinyl chloride, a methacrylate or a styrene butadiene. In one embodiment the adhesive can be a cross-linked latex, such as an ethylene vinyl acetate copolymer cross-linked with N-methyl acrylamide groups (thus forming a terpolymer) (col 2, lines 20-29). The broke from the process thus inherently comprises from 2 to 20% latex adhesive by weight. Merker et al discloses that the adhesive can function as a wet strength agent (col 5, lines 49-57), thus the broke is the same broke as that treated by Espenmiller et al.

The art of Espenmiller et al, Merker et al and the instant invention is analogous as pertaining to paper comprising adhesive latex and treating the broke therefrom. It would have been obvious to one of ordinary skill in the art to treat the broke of Merker et al, which comprises an adhesive latex using the process of Espenmiller et al to continuously recycle waste material and avoid having to store it. The instant claims recite (meth)acrylates as adhesive latex polymers. Acrylates and methacrylates are also thermosetting polymers, thus it would have been obvious to use the method of Espenmiller et al on broke containing an adhesive latex. It would have been obvious to treat broke from a multi-layer web, broke from a creped web where the bonding adhesive is a latex polymer applied in a spaced apart pattern that covers the claimed amount of the surface, and broke that comprising the claimed weight percent as typical brokes from paper products made according to the method of Merker et al. Since the adhesive latex pattern covers only 10% to 60% of the web surface, it would have been obvious to obtain some chips from the pulping coated with latex (from the coated



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portions) and some chips with little or no latex (from the uncoated portions), and to obtain the chips with little or no latex in the claimed percentages.

Claims 12 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Espenmiller et al in view of Merker et al, as used in the preceding rejection, and further in view of Danforth et al (6302342).

Espenmiller et al and Merker et al do not disclose that the pulper is a rotor/stator type pulper.

Danforth et al discloses a pulper for handling slabs of reel broke and baled pulp that comprises a circular rotor with blades that rotate within a stator (Abs).

The art of Espenmiller et al, Merker et al, Danforth et al and the instant invention is analogous as pertaining to paper comprising adhesive latex and treating the broke therefrom. It would have been obvious to one of ordinary skill in the art to use a rotor/stator type pulper to treat the broke of Espenmiller et al in view of Merker et al and further in view of Danforth et al as a pulper specifically designed for treatment of broke.

***Allowable Subject Matter***

Claims 27-32 and 34-35 are allowed.

Claims 4-5, 13 and 21-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



Claims 50, 56 and 62-64 would be allowable if rewritten in independent form to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The nearest prior art, Espenmiller et al, discloses pulping broke in a pulper to the claimed aggregate size. The aggregates are further treated by cooking with chemicals to break down the polymeric material, then defibered prior to reuse in making paper (col 1, lines 55-69). There is no disclosure in prior art of reusing the claimed larger fiber aggregates from the pulper in a paper product and one of ordinary skill in the art would not find it obvious to reuse such large aggregates. There is no disclosure of refining the pulped broke. Espenmiller et al discloses a Canadian Standard Freeness of the recovered fibers ranging from 50 to 98 (Table 5), a much lower value than the claimed freeness. It would not have been obvious to obtain the high claimed value of freeness.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Cordray whose telephone number is 571-272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

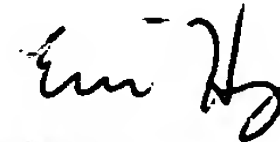
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



DRC



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